

SECTION 1502
SUBMITTALS

1502.1 GENERAL

The requirements of this section of the specifications consist of furnishing all manufacturer's data, shop drawings, samples, certifications, guarantees, reports, operation manuals, maintenance manuals, lubrication charts, spare parts lists, special tools and factory representative required for installation of special items, in strict accordance with the specifications and the applicable drawings, and subject to the terms and conditions of the contract.

1502.2 SUBMITTAL CHECK LIST

The Submittal Check List that will be part of the Supplemental Specifications on each project, lists items which will be required to construct the project for which submittals will be required by the ENGINEER. The list of submittals is for the convenience of the CONTRACTOR and supplier, and should not be considered as the complete and final requirements. Additional submittals and material may be required by the ENGINEER as project progresses.

1502.3 WHAT TO SUBMIT

1502.3.1 The following is an explanation of what to submit if indicated on the check list.

A. Manufacturer's Data: Any catalog type literature on the item.

B. Shop Drawings: Detail drawings with all dimensions and locations shown.

C. Samples: The item that will be supplied.

D. Certifications: Any certifications required by these specifications or standard specifications and/or requirements for that item, to cover raw materials and testing of the final product.

E. Guarantees: A copy of the guarantee to be given to the Owner on that item.

F. Lab Test Reports: Laboratory test reports required to show that the item meets all specified requirements.

G. Operation Manuals and Maintenance Manuals: The manufacturer's standard Operation and Maintenance Manuals on that item.

H. Special Tools: A list of special tools required to operate and maintain that item and the number of each tool the manufacturer will supply.

I. Lubrication Charts and Grease Specs: A list of all lubrication points on that item

with frequency and type of lubricant to be used at each point.

J. Spare Parts List: A list of spare parts that the manufacturer recommends the Owner maintains.

K. Factor Representative: A factory representative will be required to be present for installation and/or start-up of that item of equipment.

L. Field Test Reports: The field test reports are reports and/or tests that have been conducted on the item in an existing installation over a period of time.

M. Pump and Blower Curves: Certified curves based on the test performance of each pump or blower to be installed on this project.

N. Load Design: Load design calculations shall show the maximum load the item can carry under the support conditions shown on the drawings for both uniform and concentrated loads. These calculations shall be under a registered professional engineer's signature.

O. Additional literature, reports and/or tests may be required by the ENGINEER.

1502.3.2 When pumps of any type are part of the project, in addition to the other information required on pump submittals the CONTRACTOR shall submit the following data for each unit of pumping equipment.

- A. Name of manufacturer.
- B. Type of pumps.
- C. Number of stages and speed.
- D. Diameter of impeller.
- E. Type of bearings.
- F. Size of suction and discharge piping and barrel.
- G. Type of thrust bearing.
- H. Shut-off pressure.
- I. Impeller material.
- J. Pump shaft material and diameter.
- K. Capacity and head.
- L. Make and type of motor.
- M. Horsepower of motor with proper NEMA Standard insulation.
- N. Type of motor bearings.
- O. Net weight of complete unit.
- P. Guaranteed KWH required to pump 1,000 gallons against the required head.
- Q. Discharge column:
 - Material
 - Weight per foot
 - Type of Joint
 - Spacing of joints
 - Inside diameter
- R. Line shaft:
 - Material
 - Diameter
 - Length of sections

- S. Line Shaft Bearing:
 - Length
 - Spacing
 - Type
 - Material
- T. Thrust Bearing:
 - Complete computations on thrust conditions.
 - Computed pump thrust at shut-off.
 - Computed pump thrust at operating condition.
 - Rated bearing capacity.
 - Manufacturer.
 - Method of cooling.
 - Weight of bearing.
- U. Combined overall efficiency of pump and motor when operating at rated condition.
- V. Does equipment offered differ from specification requirement?
- W. Do catalogs, descriptive literature, etc., covering all equipment accompany the bid?

SUBMITTAL CHECK LIST

[illegible]